



# The Role of Libraries in Promoting Climate Literacy in Nigeria

Usang N Onnoghen<sup>1</sup>, Somkenechi S Unachukwu<sup>2</sup>, Evelyn I Orji<sup>3</sup>, Beatrice O Ewa<sup>4</sup> and Benjamin Anabaraonye<sup>5\*</sup>

<sup>1</sup>Department of Environmental Education, University of Calabar, Nigeria

<sup>2</sup>Department of Environmental Management, Nnamdi Azikiwe University, Awka, Nigeria

<sup>3</sup>Institute of Education, University of Calabar, Calabar, Nigeria

<sup>4</sup>Nnamdi Azikiwe Library, University of Nigeria, Nsukka, Nigeria

<sup>5</sup>Benjy Poetry and Music Global Concepts, Awka, Nigeria

**Submission:** June 10, 2024; **Published:** June 25, 2024

**\*Corresponding author:** Benjamin Anabaraonye, Benjy Poetry and Music Global Concepts, Awka, Nigeria. Email: benjaminshines@gmail.com

## Abstract

Climate literacy is vital across communities, cities, campuses and companies thereby enhancing climate resilience in Nigeria. Climate literacy is crucial as it empowers individuals, communities and institutions with the knowledge to understand the impacts of climate change, the underlying science, and the strategies needed for mitigation and adaptation. Through literature review and participant observation, this study identifies the role of libraries in promoting climate literacy in Nigeria. It further identifies the role of libraries in enhancing plastic pollution education for enhancing climate resilience in Nigeria. The library is a vital link between the user and the information they require, while the active players in achieving this aim are librarians. A special case study is that of Nnamdi Azikiwe Library, University of Nigeria, Nsukka, Nigeria. It concludes with the clarion call for more research and funding for libraries to promote climate literacy thereby enhancing climate resilience in Nigeria.

**Keywords:** Climate Literacy; Education; Library; Resilience; Sustainable Development

**Abbreviations:** ACCAI: African Climate Change Adaptation Initiative; NGOs: Non-Governmental Organizations; FEFA: Federal Environment Protection Agency

## Introduction

Climate literacy involves understanding your influence on climate and climate's influence on you and society [1]. A climate-literate person understands the essential principles of Earth's climate system, knows how to assess scientifically credible climate information, communicates about climate change in a meaningful way, and can make informed and responsible decisions regarding actions that may affect climate [1]. By being informed, people can make more environmentally responsible decisions, advocate for sustainable policies, and adapt to changes that are already occurring. Climate literacy also involves understanding the evidence for climate change, recognizing its influence on environmental and human systems, and being able to participate in community-based efforts to reduce emissions and adapt to its impacts. Climate change education is very vital across communities, cities, campuses and companies in Nigeria to raise a new breed of climate literate citizens for sustainable

development [2]. A climate literate person knows the dispositions (how to respond), competencies (skills and abilities of how and when), and environmentally responsible behavior to address climate change [1]. The library is one of those valuable edifices where climate related information can be accessed thereby enhancing climate literacy in Nigeria. A good example is African Climate Change Adaptation Initiative (ACCAI) Library, University of Nigeria, Nsukka which is also a sub-section of the Nnamdi Azikiwe Library, University of Nigeria, Nsukka, Nigeria. ACCAI-UNN disseminates and make available for public reading educational journals, magazines, documentaries and periodicals in the field of climate change adaptation, mitigation and resilience for promoting climate literacy in Nigeria [3]. The impacts of climate change are felt in a profound way on sustainable economic growth in Nigeria [4]. Onnoghen, Onwuzurike, & Anabaraonye [5] identified the need for enhancing climate resilience through green entrepreneurship education in Nigeria. Green entrepreneurship

education should be readily available at every higher education institution in Nigeria because of its 21<sup>st</sup> century relevance. A green entrepreneur is someone who starts and runs an entrepreneurial venture that is designed to be green in its products and processes from the very moment it is set up [6]. Environmental Education which should be undertaken by higher education institutions has been identified as a potent tool for the attainment of sustainable development goals (Good Health and Wellbeing, Clean Water and Sanitation, Affordable and Clean Energy and Sustainable Cities and Communities) in Nigeria [7]. Environmental education/Climate change education is therefore a life-long endeavor and needs to engage individuals and communities from our youngest to our oldest members of society and all sectors that work with employees, community members, government agencies, and others [1]. Climate change education will go a long to promote climate literacy thereby enhancing climate resilience in Nigeria [2]. Librarians through the ages have been charged with the responsibility of information dissemination, managing information resources, and the library users. One of the management practices in the library is the preservation and conservation of library resources which is aimed at enhancing climate resilience for sustainable development. This study is therefore significant as it explores the role of Libraries in promoting climate literacy for sustainable development in Nigeria.

### Methodology

Materials used for this study were derived from online academic journals, magazines, articles, conference papers, textbooks, and educational materials from libraries. The researchers gathered a lot of materials for the research but summarized the characteristics of the papers that centered more on "The Role of Libraries in promoting climate literacy in Nigeria". This enabled the researchers to generate the

synthesis of various views of other researchers on the subject matter.

### Results and Discussion

This paper is therefore very significant as it explores new opportunities, practices and policies for promoting climate literacy in Nigeria. Anthropogenic global climate change is currently approaching tipping points where natural forces in the climate system react to cause further global warming [8]. Economic processes such as the burning of fossil fuels are responsible for rising CO<sub>2</sub> concentrations in the atmosphere. Additional greenhouse gases retain infrared radiation and raise surface temperature of the Earth. There are only two realistic scenarios we need to consider for climate change analysis, (A) timely stabilization of temperature growth. Achieving this requires stabilization of CO<sub>2</sub> emissions within a decade, followed by a gradual decline in CO<sub>2</sub> usage, (B) if the conditions for the first scenario are not met, then excessive temperature increases rapidly become unstoppable [9]. The future path is in the hands of today's decision makers.

### Climate Change Education for Sustainability in Nigeria

Climate change education is the best channel to educate people on the need for promoting awareness, by inculcating responsible and reasonable behavior in them so that their attitude will be environmentally friendly [10]. Nigeria is a country which has the abundance of human and natural resources, including skills and talents which are needed to maximize the green entrepreneurial opportunities in climate change adaptation and mitigation for our sustainable development and economic growth locally, nationally and globally [11]. Solid waste management is the most pressing environmental challenge facing urban and rural areas in Nigeria. Nigeria's population is estimated to double by 2050 and that could mean more solid waste hanging around and more plastic for recycling [12]. Climate change, environmental degradation, plastic pollution and other negative environmental vices in Nigeria have necessitated the introduction of climate literacy to enable children and adults to respond to these environmental problems.

### Tackling Plastic Pollution Through Climate Literacy in Nigeria

Plastic pollution is one of the climate change issues which can be effectively tackled through climate literacy in Nigeria. Plastic pollution is the accumulation of plastic wastes which can come in the form of plastic bottles, plastic bags, and much more, in the environment that adversely affects animals and humans [13]. Plastic pollution is destroying wildlife, damaging ecosystems, clogging drainage systems, and harming fisheries and tourism on a global scale. The plastic pollution problem needs to be solved with urgent alacrity which is also part of solving the climate change problem ravaging the world. Solutions for plastic waste and plastic substitutes will need to come through innovations (including bioremediation, plastic recycling, etc.). New skills, knowledge and education (including the use of poetry and music) can help create enduring solutions to plastic pollution and develop systems whereby communities can turn waste into wealth, a concept that helps to view waste management of all types as a resource rather than a refuse [10,14]. Furthermore, plastic pollution education which is enhanced through climate literacy encourages people to take action towards improving life and protecting the environment by reducing, recycling and reusing plastics. Plastics are a group of materials, either synthetic or naturally occurring, that may be shaped when soft and then hardened to retain the given shape. Plastics are durable, light weight, and inexpensive materials, which mold readily into a variety of products with a wide range of applications [15]. Plastic, one of the frequently used materials in today's technologically advanced world is posing serious threat to environmental health in many profound ways [16]. The increased consumption of goods and services packed in plastics for a better quality of life is resulting in the generation of plastic wastes in Nigeria, especially in libraries. In Nigeria, the use of sachet water, bottled water, bottle drinks, takeaway food packs, straws, cups, and

spoons, among others in homes and occasions is alarming. These packages come in handy for most people and are widely accepted by many Nigerians. The wide acceptance is attributed to the fact that one doesn't really need to remain at the point of purchase or service to consume them. Nigerians eat and drink from this different package comfortably anywhere as the need arises; hence the increase in the rate of plastic waste generation [12]. Plastic recovery and recycling rates are poor in some African nations like Nigeria, which could be attributed to improper solid waste management, a significant issue that contributes significantly to plastic pollution [17]. Olanrewaju and Oyebade [15] opined that the Nigerian plastics and packaging sector started with about 50 plastics companies in the 1960s and had grown to over 3,000 companies in 2013 with a production capacity of over 100,000 tons per year. Being a versatile, lightweight, strong, and potentially transparent material, plastics are the drivers for their growth and ideal suitability for a variety of applications. Researchers recently identified that mitigating the negative effects of plastic pollution which can be achieved through awareness creation will go a long way to enhance sustainable economic growth in Nigeria [18].

### Libraries and Plastic Pollution Education in Nigeria

The library is a vital link between the user and the information they require, while the active players in achieving this aim are librarians. Librarians down the ages have been charged with the responsibility of information dissemination, managing information resources, and the library users. One of the management practices in the library is the preservation and conservation of library resources which is aimed at ensuring the longevity of the library resources. Most of the library resources are made up of plastics, such as computer hardware, printer, plastic chairs and tables, nylon plastic handbook, and waste bins. This study identifies the role of libraries in promoting climate literacy and plastic pollution education for sustainable environment in Nigeria.

The library can play this role through:

#### Creating Awareness and Advocacy Campaigns

One of the ways libraries can promote climate literacy and plastic pollution education in the library environment is by organizing seminars, workshops, and training sessions on climate change and plastic waste management for different categories of students. For instance, the library can host workshops for school children to educate them on the different types of plastics, their ways of disposal, how to segregate various kinds of plastics and recycling practices. Also, the library can collaborate with Non-Governmental Organizations (NGOs), local authorities, and policymakers to hold seminars and awareness campaigns for students on the environmental degradation and negative health impacts caused by plastic debris. It may directly contribute to the reduction in plastic pollution. Libraries can be involved in advocacy campaigns aimed at sensitizing policymakers,

stakeholders, and the public to the need for effective plastic waste management practices. Libraries can collaborate with environmental organizations and advocacy groups to advance policies that will promote climate change education, plastic waste reduction and improve plastic waste management in Nigeria.

#### Library Environmental Education

Library environmental education may also play an important role in changing users' attitudes toward plastic waste pollution. Educating library clients about plastic waste pollution will provide users with awareness about the issue and the appropriate actions to be taken and will motivate the users to help the environment. Babalola, Babalola and Okhale [19] stressed that the Nigerian.

The Federal Environment Protection Agency (FEPA) and other relevant agencies established an environmental reference Library at its Headquarters in Abuja in 1994 in addition to the existing Library in Lagos office to educate the public on environmental issues. FEPA was advised to collaborate with the Federal Ministry of Education to set up an Environmental Conservation Club in secondary schools. In its efforts, the Federal Ministry of Education developed an Educational Master Plan and Curricula for both formal and informal educational systems in Nigeria to provide the public with excellent and up-to-date reading materials on environmental issues.

#### Library Exhibition

Libraries can host exhibitions and displays that showcase plastic recycling ideas and innovations in plastic pollution. They can organize programs such as seminars, workshops, and exhibitions to educate people about the proper disposal of plastic waste, recycling, and reuse. They can go further to inculcate the use of visual aids and other devices aimed at reaching the disabled (blind, lame, deaf and dumb) with plastic pollution education for environmental sustainability. These visual displays may feature art pieces made with recycled plastics, informative posters on the different types of plastics and their uses, and educational videos on plastic pollution and related hazards. These initiatives would create a sense of consciousness in students about proper plastic waste management tactics. They could employ poetry recitations and drama presentation in their exhibition to entertain and educate their audience on eradicating the menace of plastic pollution.

#### Research And Information Dissemination

Libraries can serve as a repository of information on climate change education and plastic waste management. Libraries can collate data and information on plastic waste management, recycling initiatives, and best practices globally and make them available to users through their resources. Libraries can be involved in research on plastic waste management. They can provide materials and resources for researchers to study the impact of plastic waste on the environment, develop new technologies for

recycling, and create biodegradable alternatives. It is good to mention that the Nnamdi Azikiwe Library, University of Nigeria, Nsukka has a special climate change research section called the African Climate Change Adaptation Initiative (ACCAI). ACCAI has the role of promoting research and information dissemination in the field of climate change adaptation and mitigation including plastic pollution education for environmental sustainability. [20-22]

### Community Engagement and Collaboration

Libraries can collaborate with waste management organizations in the country to create a forum for sharing information on effective plastic waste management practices that promote environmental sustainability. Libraries can involve the local community and schools in plastic waste reduction and management initiatives. They can organize community awareness campaigns, school programs, and reading clubs that involve environmental themes, including the challenges of plastic waste and how to reduce it.

### Institutional Support

Libraries can provide institutional support to government agencies, civil society groups, and academic institutions that are working towards developing policies and plans that will help manage plastic waste effectively. Libraries can encourage community building by organizing programs that bring together community members to learn about recycling ideas, techniques, and best practices. They can also engage in advising, counseling, and training programs for community members to help them adopt sustainable plastic waste management practices.

### Recommendations

There is a great need to enlighten and inspire staff from all areas within the library to help promote climate literacy in Nigeria. The library campaign will help to enhance plastic pollution education and lessen the number of plastic bottles, sachet water, and biscuit pack wastes that are dumped indiscriminately each day by staff and students in the library environment. The awareness campaign will help to promote the role of libraries and librarians in the advancement of environmental sustainability standards and the promotion of specialized knowledge within professional practice. A major element of the campaign is communications, with the use of poetry, large posters, pull-ups, and banners, etc. across the library and in key locations, everyone is exposed to the message that the library is going climate literacy.

### Conclusion

The world needs climate-literate leaders to make correct decisions and implement tough measures. Unfortunately, such leaders are very scarce, and progress is slow on the climate change treaty. Thus, Libraries and Librarians across various communities, cities, campuses and companies in Nigeria need to rise to the

clarion call to promote climate literacy thereby raising a climate literate citizenry. Libraries can play a crucial role in enhancing climate literacy and plastic pollution education for sustainable environment in Nigeria by providing education, information, advocacy, research, innovation, and community engagement. Libraries must recognize the importance of their role and actively commit to addressing climate change challenges to achieve a sustainable environment. Collaboration among libraries, individuals, businesses, and government agencies is necessary for promoting climate literacy thereby enhancing climate resilience in Nigeria.

### References

1. North American Association for Environmental Education (NAAEE) (2023) What is Climate Literacy?
2. Anabaraonye B (2017) Climate change education for sustainable development in Nigeria. *Review of Education, Institute of Education Journal* 28: 403-414
3. ACCAI-UNN (2021) Africa Climate Change Adaptation Initiative (ACCAI-UNN): Screening of Climate Change Documentary.
4. Onnoghen NU, Orji EI, Olisah NC, Anabaraonye B (2024) The impacts of climate change on sustainable economic growth in Nigeria. *Journal of Civil Engineering and Applications* 5(1): 12-15
5. Onnoghen NU, Onwuzurike U, Anabaraonye B (2024) Enhancing climate resilience through green entrepreneurship education in Nigeria. *Journal of Civil Engineering and Applications* 5(1): 33-36
6. Anabaraonye B, Okafor CJ, Eriobu CM (2019) Green entrepreneurial opportunities in climate change adaptation and mitigation for sustainable development in Nigeria.
7. Onnoghen UN, Ojong AA, Omang TN, Obibessong V, Asor LJ (2020) Environmental Education: A Potent Tool for the Attainment of Sustainable Development Goals (Good Health and Wellbeing, Clean Water and Sanitation, Affordable and Clean Energy and Sustainable Cities and Communities) in South-South Nigeria. *PalArch's Journal of Archaeology of Egypt/Egyptology* 17(8): 1198-1210.
8. Hansen J, Mki Sato, Kharecha P, Beerling D, Berner R, et al. (2008) Target atmospheric CO<sub>2</sub>: Where should humanity aim? *Open Atmos Sci J* 2: 217-231.
9. Meinshausen M, Meinshausen N, Hare W, Raper SCB, Frieler K, et al. (2009) Greenhouse-gas emission targets for limiting global warming to 2°C. *Nature* 458: 1158-1162
10. Anabaraonye B, Nji AI, Hope J (2018) Poetry as a valuable tool for climate change education for global sustainability. *International Journal of Scientific & Engineering Research* 9 (9): 81-85.
11. Anabaraonye B, Chukwuma OJ, Hope J (2019) The Health and Economic Impacts of Waste Recycling for Sustainability in Nigeria. *J Public Health Dis Prev* 2: 101
12. Okolo NV, Amaechi M, Olisah NC, Onwuzurike U, Anabaraonye B (2023) Plastic waste management: A viable strategy for eradicating plastic pollution in Nigeria. *International Journal of Research in Civil Engineering and Technology* 3(2): 33-36.
13. Laura P (2018) We Depend on Plastic. Now We're Drowning in It. *National Geographic.com*.
14. Sosale S, Shepardson K, Aedo C, Jha A (2021) Tackling plastic pollution and climate change through education. *World bank Blogs*.

15. Olanrewaju OO, Oyebade AD (2019) Environmental Menace of Plastic Waste in Nigeria: Challenges, Policies and Technological Efforts. World Environmental Conservation Conference ppp: 322-333.
16. Rustagi N, Pradhan SK, Singh R (2011) Public health impact of plastics: An overview. Indian Journal of Occupational and Environmental Medicine 15(3): 100-103.
17. Babayemi JO, Dauda KT (2018) Evaluation of solid waste generation, categories and disposal options in developing countries: A case study of Nigeria. J Appl Sci. Environ Manage 1(3): 83-88.
18. Anabaraonye B, Olowoyeye T, Anukwonke CC (2023) Mitigating the Negative Effects of Plastic Pollution for Sustainable Economic Growth in Nigeria. In: Eslamian S, Eslamian F (eds) Disaster Risk Reduction for Resilience. Springer, Cham.
19. Babalola, Yemisi T, Babalola Akinola D, Okhale Faith O (2010) Awareness and Accessibility of Environmental Information in Nigeria: Evidence from Delta State. Library Philosophy and Practice (e-journal). 460.
20. Hauke P (2019) Green Libraries towards Green Sustainable Development. Best Practice Examples from IFLA Green Library Award 2016–2019.
21. Onnoghen NU, Orji EI, Olisah NC, Anabaraonye B (2024) The impacts of climate change on sustainable economic growth in Nigeria. Journal of Civil Engineering and Applications 5(1): 12-15
22. Onnoghen NU, Onwuzurike U, Anabaraonye B (2024) Enhancing climate resilience through green entrepreneurship education in Nigeria. Journal of Civil Engineering and Applications 5(1): 33-36



This work is licensed under Creative Commons Attribution 4.0 License

Your next submission with Juniper Publishers  
will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats  
( Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission

<https://juniperpublishers.com/online-submission.php>